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JUL 16 1964

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
IDAHO

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,
and
IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in cooperation with the Comptroller of Water Rights of British Columbia, and Federal, State and private organizations listed on the last page of this report.

||||||| AS OF |||||||
MAY 1, 1964

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN. 15 - APR. 1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
IDAHO

Report prepared by

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and

J. ALDEN WILSON Asst. Snow Survey Supervisor

SOIL CONSERVATION SERVICE
SNOW SURVEY SECTION
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Issued by

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WATER SUPPLY OUTLOOK for IDAHO



GENERAL SUMMARY FOR MAY 1, 1964

The water supply outlook for Idaho did not change significantly during the month of April. Water supplies are forecast to be close to normal throughout the entire state. Cool temperatures delayed the snow melt on north slopes and at high elevations. Valley and south slope snow pack melted at a steady rate. The retarded snow melt will increase the speed of runoff and raise the flow of the rivers much higher than would ordinarily occur under normal conditions.

Snowfall in the high mountainous areas throughout Idaho was above normal during April. Goat Lake snow course on the Clearwater River increased 7.3 inches of water during this month. In an average year, the snow-water content would have decreased slightly. Another new course on the Clearwater River - Lost Lake - has 161 inches of snow with 74.4 inches of water. Very short back records on these courses make interpretations difficult.

In general, the cool temperatures retarded snow melt and resulted in below normal runoff during April. This will cause nearly the same volumes of water to flow during the May through September period as was expected for April through September. The Spokane River is a good example. The April through September volume forecast on the Spokane River was 105% of its normal on April first. When the actual flow for April was subtracted from this forecast, the May through September period increased to 125% of its average. A similar situation exists on the Clearwater River and, to a lesser degree, on all rivers in Idaho.

Farm operations have been delayed by the late snow melt and cool weather. The heavy valley and foothill snow cover that occurred this season has been a major factor in retarding general farm and ranch operations. However, this snow cover has now melted and soil moisture conditions are excellent for range forage and farming.

Soil moisture stations throughout the state indicate excellent soil moisture as a result of the melting snow. In many areas, the soil which has been relatively warm beneath the snow all winter, has absorbed more precipitation and melting snow than was expected. It was fortunate that the soil was unfrozen beneath the heavy snow in the foothills because it prevented fast destructive runoff.

Reservoir-stored water throughout the state varies from good to excellent and adjustments are being made to make the most efficient use of the 1964 season's flow.

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

MAY 1, 1964

50 0 50 100 150

SCALE IN MILES

Contents
RESERVOIR
Capacity

437.6
PEND OREILLE
1561.0

226.6
COEUR D'ALENE
238.5

102.6
DEADWOOD
161.9

345.9
CASCADE
653.2

469.9
BROWNLEE
980.2

624.7
OWYHEE
715.0

161.1
LAKE LOWELL
169.0

182.5
LUCKY PEAK
278.2

278.7
ARROWROCK
286.6

327.8
ANDERSON RANCH
423.2

101.1
NOXON
334.6

2003.0
HUNGRY HORSE
3428.0

770.7
FLATHEAD LAKE
1791.0

42.2
MACKAY
44.2

133.4
ISLAND PARK
127.0

9.4
GRASSY LAKE
15.2

635.4
JACKSON LAKE
847.0

821.5
PALISADES
1200.0

1697.3
AMERICAN FALLS
1700.0

802.9
BEAR LAKE
1421.0

28.1
LITTLE WOOD
33.3

49.3
SALMON FALLS
182.6

20.3
OAKLEY
74.4

192.2
MAGIC
191.5



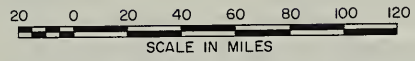
RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943 - 57 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork - Pend Oreille</u>				
Hungry Horse	3428.0	2003.0	2535.0	2048.0*
Flathead	1791.0	770.7	966.5	936.0
Pend Oreille	1561.0	437.6	636.6	783.7
Noxon	334.6	101.1	117.8	--
<u>Spokane</u>				
Coeur d'Alene	238.5	226.6	168.4	350.2
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	847.0	635.4	631.3	503.3
American Falls	1700.0	1697.3	1732.8	1614.9
Palisades	1200.0	821.5	1191.0	--
Island Park	127.0	133.4	133.4	127.4
Grassy Lake	15.2	9.4	12.5	13.4
Brownlee	980.2	469.9	977.0	--
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	20.3	22.1	28.5
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	49.3	45.0	56.6
<u>Big Lost</u>				
Mackay	44.2	42.2	37.8	36.0
<u>Big Wood</u>				
Magic	191.5	192.2	191.5	183.3
<u>Little Wood</u>				
Little Wood	33.3	28.1	30.4	--
<u>Boise</u>				
Anderson Ranch	423.2	327.8	355.4	215.6*
Arrowrock	286.6	278.7	284.1	222.3
Lucky Peak	278.2	182.5	256.3	--
Lake Lowell (Deer Flat)	169.0	161.1	162.5	160.2
<u>Owyhee</u>				
Owyhee	715.0	624.7	378.1	617.5
<u>Payette</u>				
Cascade	653.2	345.9	599.7	--
Deadwood	161.9	102.6	118.8	99.4
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	802.9	804.2	921.5
* Estimated 1943-57 Average				

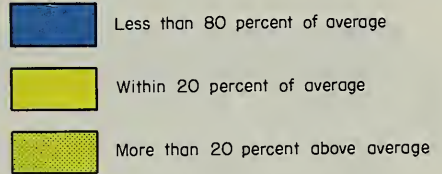
PROSPECTIVE STREAMFLOW

Based on Snow Surveys made on approximately
MAY 1, 1964

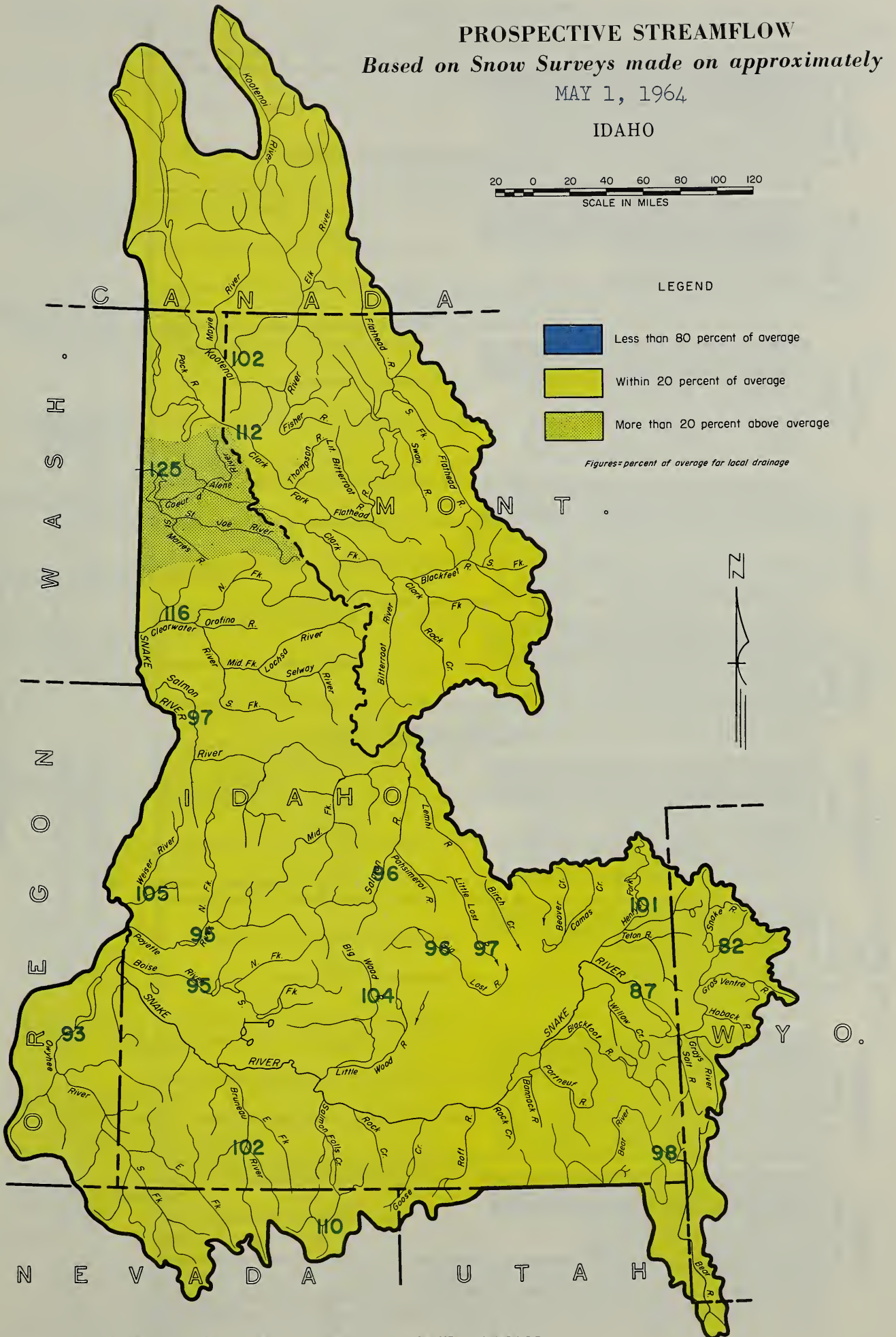
IDAHO



LEGEND



Figures=percent of average for local drainage

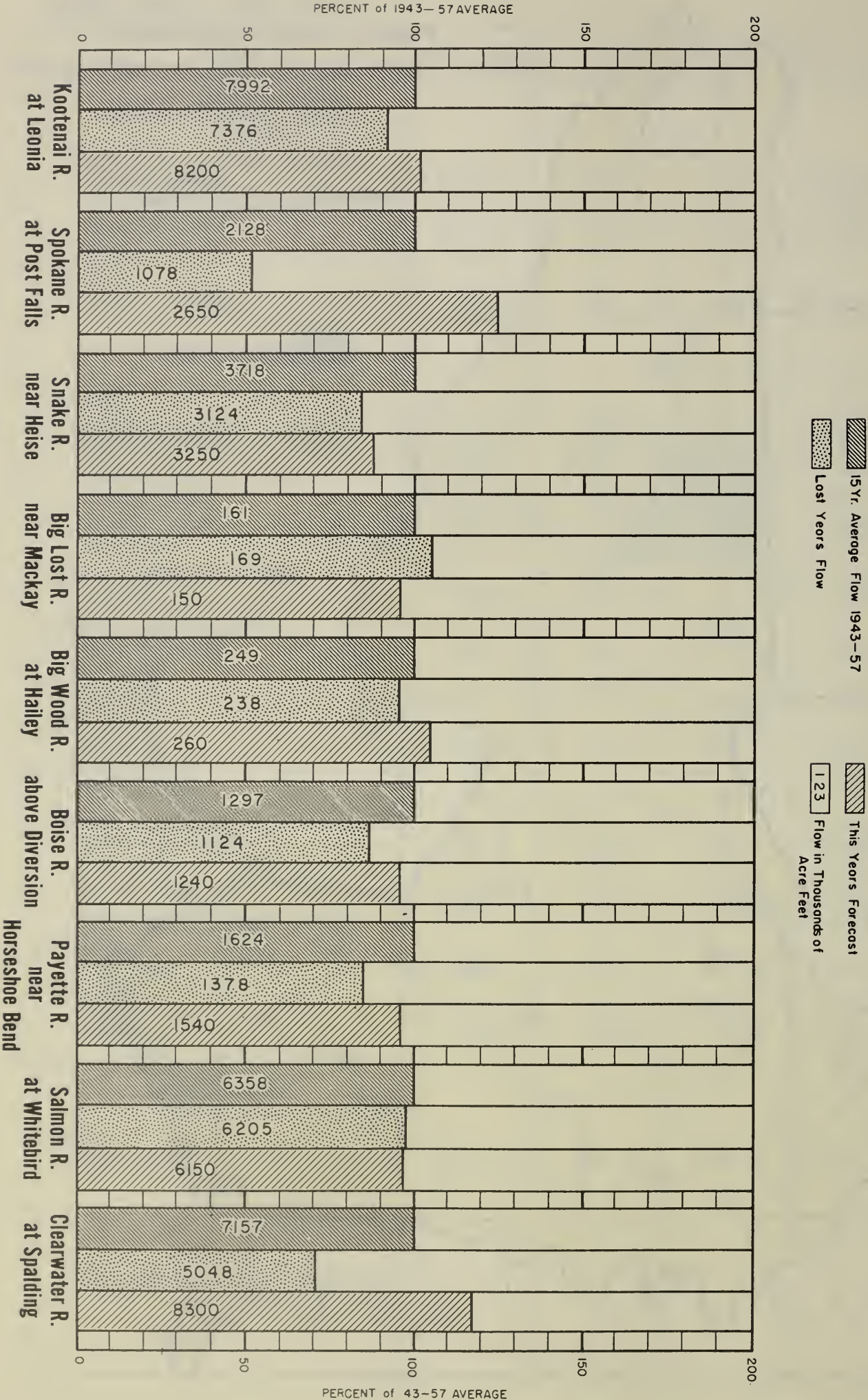


FORECASTED WATER SUPPLY AS PERCENT OF THE 1943-57 15 YEAR AVERAGE

STREAMFLOW FORECASTS (May through September period)

Based on Snow Surveys made on approximately

MAY 1, 1964



WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair"^a and "Average" or "Excellent") **and** **STREAMFLOW FORECASTS** (1,000 Ac. Ft.)^c

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
<u>UPPER COLUMBIA BASIN</u>					
<u>KOOTENAI RIVER</u>					
Leonla	(at)	8200	May-Sep	7994	102
		6920	May-Jul	6903	102
		5470	May-Jun	5341	102
<u>PEND OREILLE RIVER</u>					
<u>Clark Fork River</u>					
Whitehorse Rapids	(at)	13600	May-Sep	12144	112
		12300	May-Jul	10975	112
		10100	May-Jun	9027	112
<u>Priest River</u>					
Priest River 1/	(nr)	840	May-Jul	729	115
<u>SPOKANE RIVER</u>					
Post Falls 2/	(at)	2650	May-Sep	2127	125
<u>Coeur d'Alene River</u>					
Cataldo	(nr)	1030	May-Sep	842	122
		960	May-Jul	783	123
<u>St. Joe River</u>					
Calder	(at)	1260	May-Sep	1051	120
		1210	May-Jul	983	123
<u>SNAKE RIVER BASIN</u>					
<u>SNAKE RIVER - MAIN STEM</u>					
Moran 3/	(at)	722	May-Sep	881	82
Heise 4/	(nr)	3250	May-Sep	3718	87
Blackfoot 5/	(nr)	3270	May-Jul	3735	88
Weiser	(at)	5200	May-Sep	5835	89
<u>Henry's Fork</u>					
Ashton 6/	(nr)	530	May-Sep	526	101
Rexburg 7/	(nr)	1150	May-Sep	1164	99
<u>Teton River</u>					
St. Anthony	(nr)	360	May-Sep	376	96
<u>Blackfoot River</u>					
Blackfoot					
Reservoir Inflow		110	May-Sep	--	--
<u>Portneuf River</u>					
Topaz	(at)	65	May-Sep	--	--

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow corrected for storage in Priest Lake. 2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie canals. 3/ Corrected for storage in Jackson Lake. 4/ Corrected for storage in Jackson Lake and Palisades. 5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake and diversions between Heise and Blackfoot. 6/ Corrected for storage in Henry's Lake and Island Park Reservoir. 7/ Corrected for storage in Henry's Lake, Island Park, Grassy Lake and diversions between Ashton and Rexburg.

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair"^a and "Average" or "Excellent")^a and STREAMFLOW FORECASTS (1,000 Ac. Ft.)^c

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
<u>Salmon Falls Creek</u>					
San Jacinto	(nr)	60	May-Sep	55	110
		58	May-Jul	53	110
<u>Bruneau River</u>					
Hot Springs	(nr)	170	May-Sep	167	102
<u>Little Lost River</u>					
Howe	(nr)	30	May-Sep	31	97
<u>Big Lost River</u>					
Howell Ranch	(at)	125	May-Jun	125	100
Mackay 1/	(nr)	150	May-Sep	156	96
<u>Big Wood River</u>					
Hailey 2/	(at)	315	May-Sep	302	104
Magic Reservoir					
Inflow 3/		235	May-Jul	--	--
<u>Little Wood River</u>					
High Five Creek	(ab)	64	May-Sep	62	103
<u>Boise River</u>					
Twin Springs	(nr)	600	May-Sep	633	95
		555	May-Jul	579	96
Boise 4/	(nr)	1240	May-Sep	1309	95
<u>South Fork</u>					
Anderson Dam 5/	(at)	475	May-Sep	511	93
<u>Owyhee River</u>					
Gold Cr., Nev. 6/	(nr)	9	May-Jul	11	82
Owyhee, Nev. 6/	(nr)	43	May-Jul	53	81
Lake Owyhee		200	May-Sep	214	93
net inflow 7/		185	May-Jul	196	94
<u>Payette River</u>					
Horseshoe Bend 8/	(nr)	1540	May-Sep	1624	95
<u>North Fork</u>					
Cascade 9/	(at)	480	May-Sep	499	96
Banks 9/	(nr)	610	May-Sep	631	97
		580	May-Jul	597	97
<u>South Fork</u>					
Banks 10/	(nr)	830	May-Jul	869	96

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow corrected for storage in Mackay Reservoir and diversion in Sharp Ditch. 2/ Combined discharge of Big Wood River and Big Wood Slough corrected for diversions. 3/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine. 4/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak. 5/ Corrected for storage in Anderson Ranch Reservoir. 6/ Corrected for storage in Wild Horse Reservoir. 7/ From U.S.B.R. records of inflow. 8/ Corrected for storage in Cascade and Deadwood Reservoirs. 9/ Corrected for storage in Cascade Reservoir. 10/ Corrected for storage in Deadwood Reservoir.

WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair"^a and "Average" or "Excellent") **and** **STREAMFLOW FORECASTS** (1,000 Ac. Ft.)^c

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
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Weiser River

Weiser ab. Crane
Creek 1/

300 May-Sep 286 105

Salmon River

Whitebird

(at)

6150 May-Sep 6358 97

Challis

(nr)

840 May-Sep 873 96

725 May-Jul 754 96

Clearwater River

Spalding

(at)

8300 May-Sep 7157 116

Kamiah

4900 May-Sep 4226 116

4700 May-Jul 4011 117

North Fork

Ahsahka

(nr)

2930 May-Sep 2505 117

2700 May-Jul 2312 117

GREAT BASIN**BEAR RIVER**

Harer

(at)

230 May-Sep 235 98

Montpelier Creek

Montpelier

(nr)

11.5 May-Sep 10.5 110

Cub River

Preston

(nr)

50 May-Sep 47 106

(a) Includes seasonal runoff, stored water, diversions and other sources. (c) Assuming normal meteorological conditions. 1/ Observed flow of Weiser River nr. Weiser minus observed flow of Crane Creek at mouth.

VALLEY PRECIPITATION 1/

Division Averages and Departures In Inches

DRAINAGE DIVISIONS	Fall		Winter		Spring	
	Sep.-Nov.-1963		Dec.'63-Mar.'64		April 1964	
	Obs.	Dep. <u>2/</u>	Obs.	Dep. <u>2/</u>	Obs.	Dep. <u>2/</u>
Kootenai, Canada & U. S.	7.28	+1.19	8.92	-1.68	1.41	-0.04
Flathead	4.34	-0.87	6.50	-1.15	1.36	-0.14
Clark Fork	3.40	+0.50	3.14	-0.34	1.22	+0.35
Pend Oreille-Spokane	8.05	-0.78	12.71	-1.67	2.20	+0.11
Upper Snake	6.51	+1.68	7.72	-1.01	1.87	+0.51
Snake River Plain	3.00	+0.90	2.73	-0.89	0.95	+0.13
Salmon-Payette-Boise	5.39	+0.68	7.86	-1.58	1.54	+0.09
Clearwater	5.46	-1.24	9.85	-1.03	3.33	+0.97
Southeastern Oregon	3.32	+0.95	3.25	-1.24	1.10	+0.25

1/ Preliminary analysis by U. S. Weather Bureau from data furnished by Meterological Service of Canada and U. S. Weather Bureau.

2/ Departure from 15-year (1943-57) drainage division average.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

UPPER COLUMBIA BASINKOOTENAI RIVER

Smith Creek	16A1	4800	4/30	115	56.4	30.7	46.3*
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PRIEST RIVER

Benton Meadow	16A2	2344	4/29	0	0.0	0.0	0.0*
Benton Spring	16A3	4900	4/28	48	21.6	7.8	17.8
Schweitzer Bowl	16A6	4500	4/29	64	30.6	--	--
Schweitzer Ridge	16A5	6100	4/29	128	56.2	--	--

SPOKANE RIVER

Copper Ridge	16B2	4800	4/28	91	44.0	9.0	27.8
Fourth of July Smt.	16B3	3100	4/28	8	3.2	0.0	--
Granite Peak	15B13	6000	4/28	122	53.3	--	--
Lookout	15B2	5250	4/28	104	44.3	25.2	33.6*
Lower Sands Creek	16B1	3400	4/28	62	28.8	2.2	12.6*
Medicine Ridge	15B4	6150	4/28	118	52.7	--	--
Outlaw Creek	15B12	3750	4/28	39	16.5	T	--

SNAKE BASINHENRY'S FORK - TETON RIVER

Big Springs	11E9	6500	4/30	42	18.7	10.5	--
Darby Canyon (A)	10F21	8250	4/30	63	23.6	20.3	--
Grassy Lake	10E15	7230	4/30	74	32.8	28.7	32.4
Island Park	11E10	6315	4/30	27	10.1	7.7	--
Pine Creek Pass	11F2	6750	4/30	35	16.0	12.8	--
State Line	11F1	6400	4/30	34	14.5	9.2	--
Teton Pass	10F13	8500	4/30	88	33.0	27.2	39.9*
Valley View	11E8	6500	4/30	38	16.1	11.5	--

RAFT RIVER, GOOSE CREEK, SALMON FALLS CREEK, BRUNEAU RIVER

Badger Gulch	14G3	6660	5/1	32	12.6	2.2	--
Bear Creek (A)	15H1	7800	4/29	44	17.5	18.6	21.2*
Bostetter R. S. (A)	14G1	7500	4/29	37	17.4	3.5	--
Boy Scout Camp (A)	13G2	7600	4/29	32	12.7	10.7	--
Cedar Creek (A)	14G5	7000	4/29	13	6.4	2.5	2.9*
Clear Cr. Meadows (A)	13H2	9050	4/29	69	27.5	23.0	--
Deadline	14G4	6900	4/28	57	28.2	12.4	20.8*
Goat Creek (A)	15H13	8800	4/29	43	20.2	18.9	19.9*
Howell Canyon	13G1	8000	5/2	65	27.0	20.6	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

Hummingbird Springs (A)	15H15	8945	4/29	81	32.2	22.6	25.2*
Magic Mountain	14G2	6700	4/28	45	21.1	9.9	16.4*
Pole Creek R. S.	15H14	8330	4/30	63	25.1	20.0	22.9*
Red Point (A)	15H18	7940	4/29	47	18.7	8.7	--
Summit Springs (A)	13G4	8500	4/29	T	T	0.0	--
Vi Pont (A)	13H3	7650	4/29	27	10.7	7.0	--
Wilson Creek (A)	15G2	7500	4/29	31	12.3	7.3	--

BIG WOOD RIVER

Dollarhide Summit (A)	14F8	8620	4/30	50	22.2	27.5	27.8*
Galena	14F1	7500	4/30	35	14.6	14.2	14.0*
Galena Summit	14F12	8795	4/30	65	24.7	23.6	24.5*
Graham Ranch	14F5	6200	4/29	17	6.8	--	--
Mount Baldy	14F9	9000	4/29	60	20.6	17.0	21.1*

Little Wood River - Fish Creek

Garfield R. S.	13F4	6554	4/27	9	3.6	5.4	1.0*
Iron Mine Creek	13F10	6370	4/27	11	4.5	5.2	--
Muldoon	13F5	6300	4/27	0	0.0	0.8	0.0*
Swede Peak	13F9	7500	4/27	41	14.7	14.5	--
Telfer Ranch	13F6	6000	4/27	0	0.0	T	--

BOISE RIVER

Atlanta Summit (A)	15F4	7500	4/30	76	33.8	32.4	36.0*
Bad Bear	15F2	5500	5/1	18	7.8	0.0	--
Bogus Basin Road	16F4	5360	4/30	0	0.0	0.0	--
Couch Summit (A)	14F10	6950	4/30	24	9.1	10.2	14.5*
Moores Creek Summit	15F1	6100	5/1	66	29.4	16.2	29.9
Trinity Mountain (A)	15F5	7400	4/30	79	35.2	37.3	45.1*

OWYHEE RIVER

Bear Creek (A)	15H1	7800	4/29	44	17.5	18.6	21.2*
Silver City	16F3	6400	5/3	27	11.4	--	7.3*
South Mountain	16G1	6340	4/29	22	9.4	0.4	3.5*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

PAYETTE RIVER

Big Creek Summit	15E2	6608	4/30	75	31.4	27.6	36.2*
Bogus Basin	16F2	6120	4/30	52	22.3	13.7	23.8
Cozy Cove	15E8	5900	4/27	24	10.0	1.9	9.2*
Crawford R. S.	15E3	4800	4/30	0	0.0	0.0	0.0*
Deadwood Airstrip	15E10	5440	4/26	21	10.9	0.0	--
Deadwood Dam	15E7	5500	4/27	27	17.7	1.5	13.1*
Deadwood Summit (A)	15E4	7000	5/7	90	37.7	38.2	48.6*
Greenfield Flat (A)	16E7	7370	5/7	97	40.6	32.1	--
Rock Flat Summit	16E1	5200	4/27	49	18.6	8.5	--
Squaw Meadow (A)	15D2	5800	5/7	67	28.1	23.8	38.2*

WEISER RIVER

Boulder Creek	16D1	5500	4/30	42	19.0	11.3	--
Mica Ridge (A)	16E6	6800	5/7	72	30.2	23.1	--
Squaw Flat (A)	16E5	6230	5/7	45	18.9	13.6	--

SALMON RIVER

Big Creek Summit	15E2	6608	4/30	75	31.4	27.6	36.2*
Borah (A)	13E8	8250	5/4	17	5.1	--	--
Chapman Creek	16D2	4215	4/30	2	0.5	0.0	0.2*
Deadwood Summit (A)	15E4	7000	5/7	90	37.7	38.2	48.6*
Galena Summit	14F12	8795	4/30	65	24.7	23.6	24.5*
Gibbons Pass	13D2	7100	5/1	63	26.7	20.0	23.0
Johns Creek	16D3	3805	4/30	0	0.0	0.0	0.0*
Mill Creek Summit (A)	14E1	8870	5/4	68	25.8	20.2	--
Morgan Creek Summit	14E4	7580	4/29	38	14.3	11.9	--
Redfish Lake	14E2	6600	4/28	17	7.5	--	--
Rock Flat Summit	16E1	5200	4/27	49	18.6	8.5	--
Twin Peaks (A)	14E3	10300	5/4	85	32.3	23.3	--
Vienna Mine (A)	14F4	8900	4/30	78	29.6	31.2	36.6*
Whitebird Summit	16D5	4390	4/30	1.5	0.3	0.0	--

Lemhi River

Above Gilmore	13E19	8200	4/27	42	12.5	12.0	--
Aspen-Hall Pass (A)	13E21	8110	5/4	48	14.3	--	--
Copes Camp (A)	13E17	7500	5/4	38	11.3	8.2	--
Hall Creek (A)	13E20	7560	5/4	18	5.4	--	--
Meadow Lake	13E18	9100	4/27	72	23.8	--	--
Schwartz Lake (A)	13E16	8500	5/4	66	21.8	16.4	--

(b) 1943-57, 15 year period. * Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	NO.	ELEVATION				LAST YEAR	AVERAGE ^b

CLEARWATER RIVER

Cayuse Airstrip	15C3	3700	4/28	6	2.7	0.0	1.4*
Coolwater Mountain	15C7	6200		Delayed		25.0	--
Crater Meadows	15C9	6100	4/28	125	57.8	36.7	--
Elk Butte	16C15	5550	4/28	119	53.2	19.5	--
Fish Lake Airstrip	15C2	5000		Delayed		32.5	46.1*
Forty-nine Meadows	15B3	5000	4/28	81	40.0	16.8	32.7*
Goat Lake	14C9	6600	4/28	130	60.1	--	--
Granite Peak	15B13	6000	4/28	122	53.3	36.4	--
Hemlock Butte	15C6	5500	5/1	157	71.8	38.5	--
Lolo Pass	14C5	5230		Delayed		19.6	29.7*
Lost Lake	15B14	6000	4/28	161	74.4	44.2	--
Medicine Ridge	15B4	6150	4/28	118	52.7	--	--
Nez Perce Pass	14D1	6575	4/27	58	22.6	9.6	12.6
Orogrande Mountain	15D4	7800		Delayed		41.9	--
Pierce Rgr. Sta.	15C5	3171	4/27	22	9.7	0.0	1.8*
Shanghai Summit	15C4	4600	5/1	77	36.7	11.0	23.6*

PALOUSE RIVER

Crumarine Creek	16C6	3500	5/2	0	0.0	0.0	0.0*
East Twin	16C3	4000	5/2	28	14.6	0.0	0.0*
Howard Creek	16C5	3500	5/2	0	0.0	0.0	0.0*
Moscow Mountain	16C2	4800	5/2	47	19.3	4.9	12.7*
West Twin	16C4	4200	5/2	1.9	0.9	0.0	0.1*

GREAT BASINBEAR RIVER

Emigrant Summit	11G6	7350	4/29	59	24.6	20.2	--
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Mink Creek

Christensen Ranch	11G11	5600	5/1	0	0.0	0.0	0.0*
Liberty Spring	11G13	8600	4/29	97	40.0	39.0	--
Strawberry Creek	11G9	5800	5/1	12	5.3	0.0	1.7*
Strawberry Mink Divide	11G10	6800	5/4	40	16.6	12.3	15.0*

Cub River

Cub River R. S.	11G12	5400	5/1	0	0.0	0.0	0.0*
Willow Flat	11G4	6100	5/1	14	6.2	T	3.0*

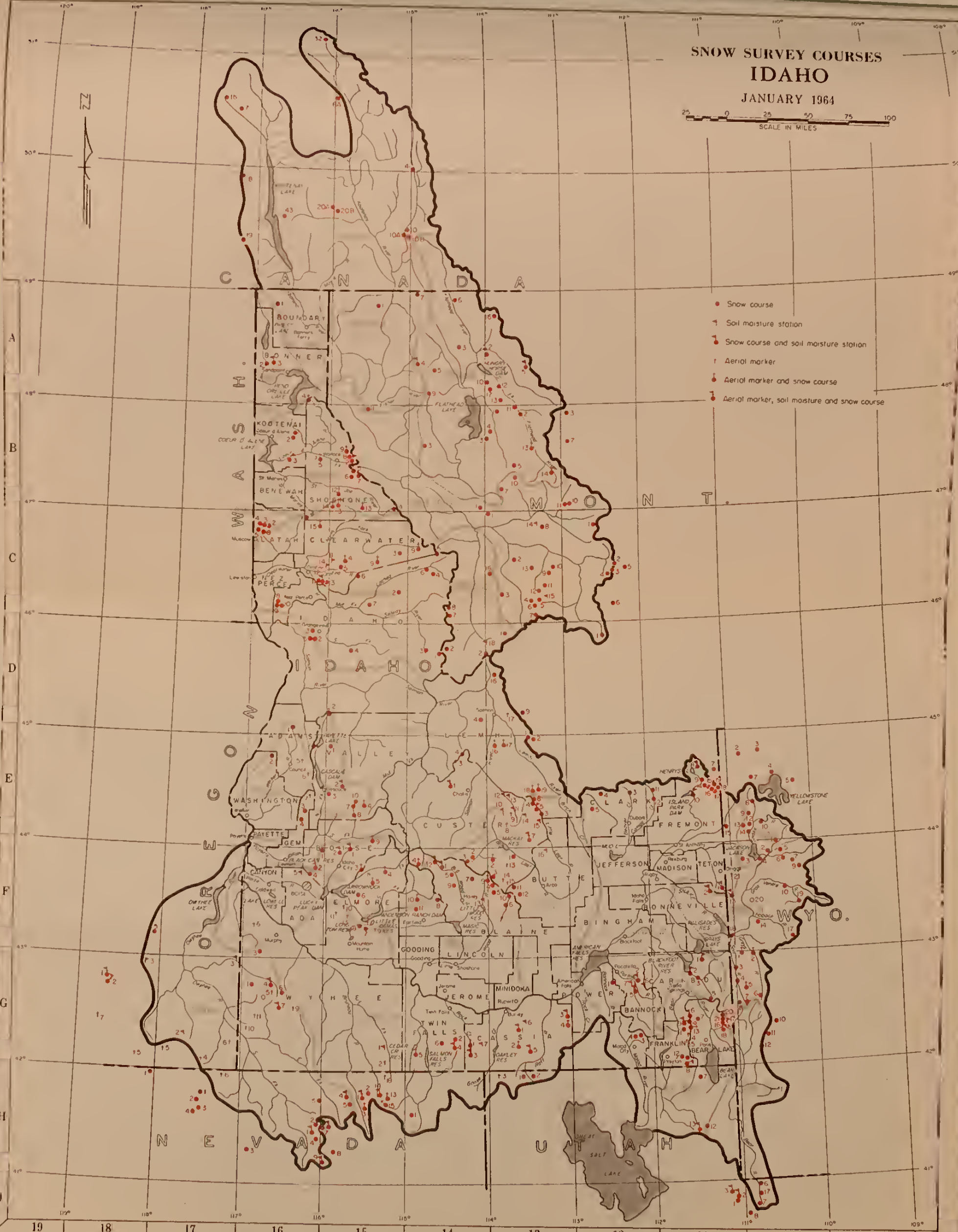
(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW SURVEY COURSES IDAHO

JANUARY 1964

25 0 25 50 75 100
SCALE IN MILES

- Snow course
- † Soil moisture station
- † Snow course and soil moisture station
- † Aerial marker
- † Aerial marker and snow course
- † Aerial marker, soil moisture and snow course



Index to IDAHO SNOW COURSES

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.	NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.				
			LAT.	AND	LONG.				LAT.	AND	LONG.						LAT.	AND	LONG.				LAT.	AND	LONG.				LAT.	AND	LONG.
KOOTENAI RIVER																															
13511	M	Barce Creek	36	26N	114	5120	13521	W	Blind Bull	6	34N	115W	8750	13531	I	Sawmill Canyon	17	12N	116E	8400	13541	I	Mica Ridge	15	15N	116E	8200				
13512	M	Barce Creek	37	26N	114	5000	13522	W	Bygones Flat	9	34N	115W	6250	13532	I	Wet Creek Summit	15	12N	116E	8175	13542	I	Squaw Flat	32	17N	116E	6330				
13513	M	Barce Creek	38	26N	114	2900	13523	W	Canyon	4	34N	115W	7750	13533	I	Big Lost River					13543	I	Flower Creek	15	16N	117E	6900				
13514	M	Barce Creek	39	26N	114	3500	13524	W	CCC Camp	9	34N	115W	7500	13534	I	Bear Canyon	26	12N	117E	7600	SALMON RIVER										
13515	M	Barce Creek	40	26N	114	6000	13525	W	Chickwood Lake	25	31N	116W	7500	13535	I	Cherry Creek Pass	24	12N	117E	8000	13544	I	Ante-Jillmore	13	13N	116E	8700				
13516	M	Barce Creek	41	26N	114	5500	13526	W	Chickwood Lake	26	31N	116W	7600	13536	I	Copper Basin	24	12N	117E	8000	13545	I	Big Flat	25	11N	116E	8100				
13517	M	Barce Creek	42	26N	114	3800	13527	W	Chickwood Lake	27	31N	116W	7600	13537	I	Iron Bog	23	12N	117E	7950	13546	I	Bar	21	11N	116E	8200				
13518	M	Barce Creek	43	26N	114	4700	13528	W	Chickwood Lake	28	31N	116W	7600	13538	I	Leadbelt	34	12N	117E	8000	13547	I	Barman Creek	16	12N	116E	8215				
13519	M	Barce Creek	44	26N	114	4700	13529	W	Chickwood Lake	29	31N	116W	7600	13539	I	Lost Wood Divide	19	12N	117E	8000	13548	I	Barman Creek	17	12N	116E	8215				
13520	M	Barce Creek	45	26N	114	4700	13530	W	Chickwood Lake	30	31N	116W	7600	13540	I	North Fork Meadow	2	12N	117E	8150	13549	I	Barman Creek	18	12N	116E	8215				
13521	M	Barce Creek	46	26N	114	4700	13531	W	Chickwood Lake	31	31N	116W	7600	13541	I	Stilleck	10	12N	117E	8150	13550	I	Barman Creek	19	12N	116E	8215				
13522	M	Barce Creek	47	26N	114	4700	13532	W	Chickwood Lake	32	31N	116W	7600	13542	I	Stilleck	11	12N	117E	8150	13551	I	Barman Creek	20	12N	116E	8215				
13523	M	Barce Creek	48	26N	114	4700	13533	W	Chickwood Lake	33	31N	116W	7600	13543	I	Stilleck	12	12N	117E	8150	13552	I	Barman Creek	21	12N	116E	8215				
13524	M	Barce Creek	49	26N	114	4700	13534	W	Chickwood Lake	34	31N	116W	7600	13544	I	Stilleck	13	12N	117E	8150	13553	I	Barman Creek	22	12N	116E	8215				
13525	M	Barce Creek	50	26N	114	4700	13535	W	Chickwood Lake	35	31N	116W	7600	13545	I	Stilleck	14	12N	117E	8150	13554	I	Barman Creek	23	12N	116E	8215				
13526	M	Barce Creek	51	26N	114	4700	13536	W	Chickwood Lake	36	31N	116W	7600	13546	I	Stilleck	15	12N	117E	8150	13555	I	Barman Creek	24	12N	116E	8215				
13527	M	Barce Creek	52	26N	114	4700	13537	W	Chickwood Lake	37	31N	116W	7600	13547	I	Stilleck	16	12N	117E	8150	13556	I	Barman Creek	25	12N	116E	8215				
13528	M	Barce Creek	53	26N	114	4700	13538	W	Chickwood Lake	38	31N	116W	7600	13548	I	Stilleck	17	12N	117E	8150	13557	I	Barman Creek	26	12N	116E	8215				
13529	M	Barce Creek	54	26N	114	4700	13539	W	Chickwood Lake	39	31N	116W	7600	13549	I	Stilleck	18	12N	117E	8150	13558	I	Barman Creek	27	12N	116E	8215				
13530	M	Barce Creek	55	26N	114	4700	13540	W	Chickwood Lake	40	31N	116W	7600	13550	I	Stilleck	19	12N	117E	8150	13559	I	Barman Creek	28	12N	116E	8215				
13531	M	Barce Creek	56	26N	114	4700	13541	W	Chickwood Lake	41	31N	116W	7600	13560	I	Stilleck	20	12N	117E	8150	13560	I	Barman Creek	29	12N	116E	8215				
13532	M	Barce Creek	57	26N	114	4700	13542	W	Chickwood Lake	42	31N	116W	7600	13561	I	Stilleck	21	12N	117E	8150	13561	I	Barman Creek	30	12N	116E	8215				
13533	M	Barce Creek	58	26N	114	4700	13543	W	Chickwood Lake	43	31N	116W	7600	13562	I	Stilleck	22	12N	117E	8150	13562	I	Barman Creek	31	12N	116E	8215				
13534	M	Barce Creek	59	26N	114	4700	13544	W	Chickwood Lake	44	31N	116W	7600	13563	I	Stilleck	23	12N	117E	8150	13563	I	Barman Creek	32	12N	116E	8215				
13535	M	Barce Creek	60	26N	114	4700	13545	W	Chickwood Lake	45	31N	116W	7600	13564	I	Stilleck	24	12N	117E	8150	13564	I	Barman Creek	33	12N	116E	8215				
13536	M	Barce Creek	61	26N	114	4700	13546	W	Chickwood Lake	46	31N	116W	7600	13565	I	Stilleck	25	12N	117E	8150	13565	I	Barman Creek	34	12N	116E	8215				
13537	M	Barce Creek	62	26N	114	4700	13547	W	Chickwood Lake	47	31N	116W	7600	13566	I	Stilleck	26	12N	117E	8150	13566	I	Barman Creek	35	12N	116E	8215				
13538	M	Barce Creek	63	26N	114	4700	13548	W	Chickwood Lake	48	31N	116W	7600	13567	I	Stilleck	27	12N	117E	8150	13567	I	Barman Creek	36	12N	116E	8215				
13539	M	Barce Creek	64	26N	114	4700	13549	W	Chickwood Lake	49	31N	116W	7600	13568	I	Stilleck	28	12N	117E	8150	13568	I	Barman Creek	37	12N	116E	8215				
13540	M	Barce Creek	65	26N	114	4700	13550	W	Chickwood Lake	50	31N	116W	7600	13569	I	Stilleck	29	12N	117E	8150	13569	I	Barman Creek	38	12N	116E	8215				
13541	M	Barce Creek	66	26N	114	4700	13551	W	Chickwood Lake	51	31N	116W	7600	13570	I	Stilleck	30	12N	117E	8150	13570	I	Barman Creek	39	12N	116E	8215				
13542	M	Barce Creek	67	26N	114	4700	13552	W	Chickwood Lake	52	31N	116W	7600	13571	I	Stilleck	31	12N	117E	8150	13571	I	Barman Creek	40	12N	116E	8215				
13543	M	Barce Creek	68	26N	114	4700	13553	W	Chickwood Lake	53	31N	116W	7600	13572	I	Stilleck	32	12N	117E	8150	13572	I	Barman Creek	41	12N	116E	8215				
13544	M	Barce Creek	69	26N	114	4700	13554	W	Chickwood Lake	54	31N	116W	7600																		

WATER SUPPLY OUTLOOK and SNOW SURVEYS - IDAHO

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If you wish to continue to receive the attached Water Supply Outlook and Snow Survey reports, please sign and return the lower portion of this form.

Check the report or reports desired (✓). If two or more different area reports are marked, the state report will be sent automatically unless specifically indicated otherwise on the card.

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Check your address on reverse side of card and correct if necessary.

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Area Reports Issued February, March, April, May.

State Report Issued January, February, March, April, May, June.

- () AREA I — KOOTENAI, PEND OREILLE, SPOKANE, PALOUSE, CLEARWATER, SALMON WATERSHEDS
- () AREA II — BOISE, PAYETTE, WEISER, BRUNEAU, OWYHEE WATERSHEDS
- () AREA III — SNAKE, BIG WOOD, LITTLE WOOD, RAFT, GOOSE CREEK, SALMON FALLS CREEK WATERSHEDS
- () AREA IV — UPPER SNAKE, BLACKFOOT, PORTNEUF, BEAR, MALAD WATERSHEDS
- () AREA V — UPPER SNAKE, HENRY'S FORK, TETON, CAMAS-BEAVER CREEK, LITTLE LOST, BIG LOST, UPPER SALMON WATERSHEDS

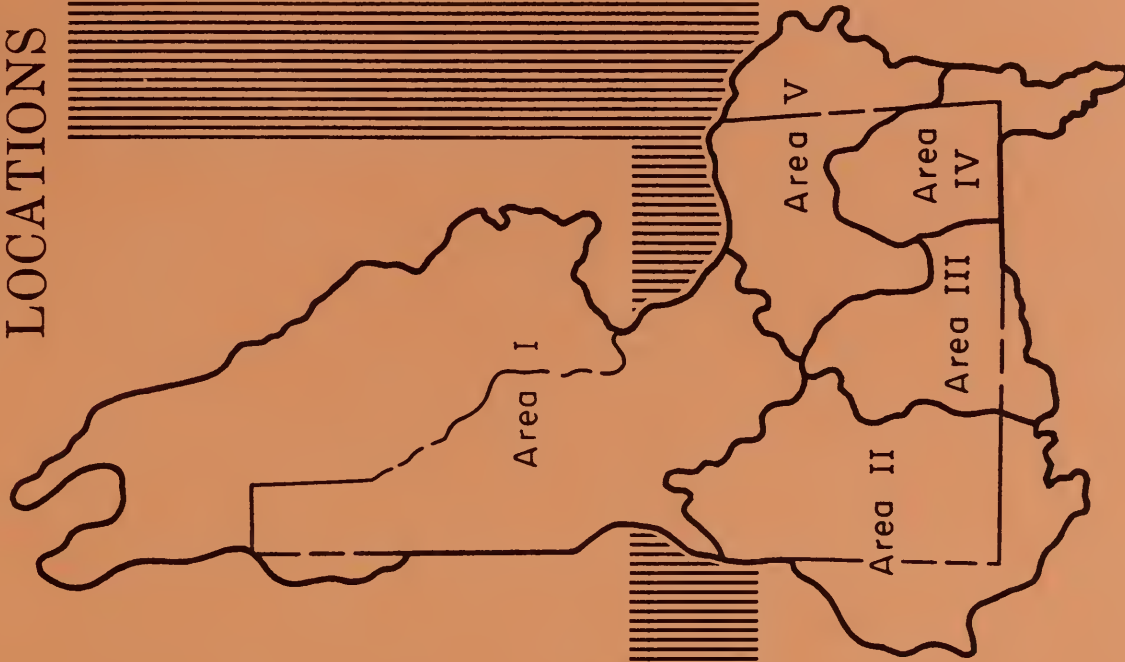
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State of Idaho Department of Fish and Game
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Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
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Oregon State Engineer and Corps of
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Salmon Falls Creek Irrigation Company
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with the Snow Survey"*